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SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN THAT WE, Hiroshi Ikeda, a citizen of Japan residing at Kawasaki, Japan, Hisayuki Tsubone, a citizen of Japan residing at Kawasaki, Japan and Yuji Kawada, a citizen of Japan residing at Kawasaki, Japan have invented certain new and useful improvements in

WEB SITE SYSTEM, CENTER SITE, SERVICE SITE,
AND SEARCHING METHOD

of which the following is a specification : -

TITLE OF THE INVENTION

WEB SITE SYSTEM, CENTER SITE, SERVICE SITE,
AND SEARCHING METHOD

5 BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention generally relates to Web site systems, center sites, service sites, and searching methods.

10 2. Description of the Related Art

With recent computer development, industries through networks have been rapidly developed. In such a circumstance, an effective suitable configuration is required for users, service
15 sites and contents by the service sites.

Also, recently, it is becoming more important to manage individual information (region, hobby) of a user and to distribute more suitable information, so called "One to One marketing".

20 Thus, each service site monitors not only information at a registration but also actions from the user after the registration, researches characteristics of the user, and then promotes products based on the characteristics of the user.

25 However, a management of the service site is closed therein. Information managed by the service site is not taken over to other service sites. The individual information of each user is separately collected and managed by each service site.

30 Thus, the user needs to register the individual information as a new user to another service site which the user wants to use. Such a registration transaction is a troublesome for the user.

35 In addition, in a certain service site, when a user purchased a product, information showing that the user purchased the product and how much the

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user paid for the product, does not report to another service site. Accordingly, when another service site promotes products, a product promotion is conducted without information concerning purchases of the user.
5 Thus, the product promotion is not effectively conducted.

Also, there is another problem in that an accurate retrieval according to a user state is not always conducted.

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SUMMARY OF THE INVENTION

It is a general object of the present invention to provide a Web site system, a center site, a service site, and a searching method in which the
15 above-mentioned problems are eliminated.

A more specific object of the present invention is to provide the Web site system, the center site, the service site, and the searching method, which can reduce overload related to a user
20 registration from the service site, can obtain new member information from the service site, and can properly search for information corresponding to a state of the user.

The above objects of the present invention
25 are achieved by a web site system including a center site (for example, a center site 10 in FIG.1) and a plurality of the service sites (for example, service sits 20₁ through 20_n) accessible through the center site; the web site system including: a member
30 information database (for example, a member information database 13 in FIG.1) managed in the center site and storing member information of the plurality of the service sites, wherein: the member information database stores the member information
35 based on information concerning a member that is obtained at the center site or the plurality of the service sites; and the center site sends the member

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According to the present invention, it is possible to reduce overload related to the user registration in each service site and it is also for each service site to obtain new member information.

Other objects, features and advantages of the present invention will become more apparent from the following detailed description when read in conjunction with the accompanying drawings, in which:

FIG.2 is a diagram showing an example of region definitions according to the present invention;

FIG.4 is a flowchart for explaining a process in the example case, according to the present invention;

FIG.6A is a flowchart for explaining a process when a pizza shop is selected in the case of FIG.5 according to the present invention and FIG.6B is a flowchart for explaining another process when a language school is selected in the case of FIG.5 according to the present invention;

FIG.8 is a diagram showing a service range

FIG.9 is a diagram showing a structure of databases referred by several search methods according to the present invention; and

DESCRIPTION OF THE PREFERRED EMBODIMENTS

FIG.1 is a diagram showing a configuration of a Web site system according to the present invention.

The user terminal 1, the center site 10 and the plurality of service sites 20₁ through 20_N are connected through a communication network such as Internet or the like.

The center site 10 includes the portal site 11, the service site 12 and a member information database 13. However, the service site 12 may not be required. For the sake of convenience, it will be described without the service site 12.

Also, the service sites 20_1 through 20_N include databases 21_1 through 21_N , respectively, which are particular information used by the service sites

20₁ through 20_N.

(Member Information Database)

The member information database 13 stores member information including, for example, member
5 name, member ID, address, telephone number, region, hobby, preferences, age, occupation, year salary and the like.

The member information database 13 stores member information of the service sites 20₁ through
10 20_N. Each of the service sites 20₁ through 20_N uses the member information stored in the member information database 13 through the center site 10.

The member information database 13 is a single database for the service sites 20₁ through 20_N.
15 A user registers as a member only for the center site 10 and then the user can access any of the service sites 20₁ through 20_N connected to the center site 10.

The member information database 13 creates and updates the member information based on
20 information concerning the members that the center site 10 or the service site 20₁ through 20_N obtained.

Next, an example of storing "region" concerning the member information in the member information database 13 included in the center site
25 10 will now be described.

When "region" is registered, a plurality of places can be registered as a single region in the member information database 13.

In addition, in this case, an excluded
30 place can be specified and then the single region can be registered with excluding the specified place.

For example, as shown in FIG.2, when "surrounding neighborhood" is registered, a home address and a proximal station are registered. In
35 this case, for example, the home address includes a 500m circumstance and the proximal station includes a 500m circumstance. Accordingly, when retrieval is

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conducted by using "surrounding neighborhood" as a key, the 500m circumstance of the home address and the 500m circumstance of the proximal station are retrieved as a range of the home.

5 Thus, the member information concerning "region" suitable to retrieve information, which is daily used, is registered.

 Also, in this case, mountains and rivers can be excluded since they are not within a range of
10 regions for daily activities.
(Operation of System)

 The user terminal 1 accesses the service sites 20_1 through 20_N and then receives services from the service sites.

15 The user terminal 1 accesses the service sites 20_1 through 20_N through the portal site 11. In this case, the center site 10 retrieves the member information of the user from the member information database and then notifies the member information of
20 one of the service sites 20_1 through 20_N that is indicated by a destination address of the user.

 In addition, the center site 10 informs member ID information as a part of the member information if necessary. The service sites 20_1
25 through 20_N indicates the member ID information and queries the member information to the center site 10 by using the member ID information. In response to the query from the service sites 20_1 through 20_N , the center site 10 sends the member information stored in
30 the member information database 13, to the service sites 20_1 through 20_N .

 Also, when the user terminal 1 accesses the service sites 20_1 through 20_N , the center site 10 classifies the member information of users and sends
35 class information of the user as a part of or the entire member information to the service sites 20_1 through 20_N . For example, a region or a gender is

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The service site, which receives the class information of the user, opens a home page suitable for the class. For example, the server site opens a home page related to a region of the user, for women or men, or the like.

For example, when the user purchases a product, a product name, a price and the like are sent to the portal site 11. The center site 10 updates a purchase history of the user.

25 By utilizing the characteristic information related to the individual purchases, a fashion product is promoted to users having the characteristics related to fashion and then the promotion can be effectively performed.

Also, each of the service sites 20,

through 20_N is not required to maintain the member information and just maintains a suitable promotion method that meets with each class of members or the like. Each of the service sites 20_1 through 20_N can
5 dramatically reduce a process amount of managing the member information.

(Service at Service site)

An example showing that the user makes an order of a pizza will now be described with reference
10 to FIG.3 and FIG.4.

"Pizza Shop (Service Site A)", "Hospital (Service Site B)", "Language School (Service Site C)" and the like are displayed at a display of the portal site 11 at the center site 10.

15 Also, the center site 10 includes member information database 13 storing information including a user Id 13_1 , an address 13_2 , hobby 13_3 , and the like for each user.

In addition, the service site A includes a
20 database 21 concerning a pizza shop. In the database 21, information including a pizza hop name 21_1 , an address 21_2 and the like is stored for each user.

Referring to FIG.3 and FIG.4, the user connects to the center site 10 by operation the user
25 terminal 1 that is a personal computer (S1). For example, the user selects a pizza shop from a screen of the portal site 11 (S2). As a result, the portal site 11 connects to a service site A for the pizza shop selected by the user. In this case, the center
30 site 10 searches for the member information database 13 and then sends an address of the user to the service site A (S3). The service site A searches for the address sent from the center site 10 from the database 21 and then automatically retrieves a pizza
35 shop closer to the address of the user (S4). The service site A generates screen information including a retrieval result and then displays a screen based

on the screen information (S5).

The user makes an order of a pizza directly from this screen.

Alternatively, the user may make an order
5 of a pizza with reference to this screen by using
another means (for example, telephone).

An example of updating the member
information database of the center site will be now
described with reference to FIG.5 and FIGS.6A and 6B.

10 Similarly to the example described in
FIG.3, in FIG.5 and FIGS.6A and 6B, the user connects
to the center site 10 (the portal site 11) by
operating the user terminal 1 (S11). When the user
selects a pizza shop from a screen displayed at
15 portal site 11 (S12), the portal site 11 connects to
the service site A. In FIG.5, the service site A
inquires the member information database 13 by the
user ID as a find key and obtains an address of the
user (S13). The service site A searches for a closer
20 pizza shop the database 21 based on the address
obtained. The service site A generates screen
information and displays a screen based on the screen
information. The user refers to the screen and makes
an order of a pizza (S14). The service site A
25 informs a price, a grade and the like of the pizza to
the portal site 11 in the center site 10 (S15). The
center site 10 updates the member information
database 13 based on the price, the grade and the
like of the pizza informed from the service site A.
30 For example, the center site 10 additionally provides
new purchase information to the purchase history 13,
for the user.

Subsequently, when the user applies to the
language school, similarly, the member information
35 database 13 of the center site 10 is updated and new
purchase information is additionally provided to the
purchase history 13.

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5 That is, the same member information
database 13 is updated by the actions of the service
sites 20₁ through 20_N, which are separated and provide
different services.

A search method conducted by each of a plurality of the service sites 12, 12₁ through 12_N (hereinafter representatively called the service sites 12), in a web site system including a center site 10 and the plurality of the service sites 12 accessible through the center site 10 will now be described.

(1) First Search Method

For example, as shown in FIG.7, in a case in which an institution is searched for, if the institution is a hospital, the service site 12 refers to a service type 15₁₀ of the search condition database 15 in the center site 10 in FIG.9 and searches for the institution within a 500m radius indicated by a condition 15₁₁. If the institution is a super market, the service site 12 refers to the service type 15₁₀ of the search condition database 15 and searches for the institution within a 2km radius

indicated by a condition 15₁₂.

Hospitals matched with the condition 15₁₁ or super markets matched with another condition 15₁₂ are displayed at a user terminal.

5 By this method, proper information corresponding to the service type can be provided.

It should be that the above numbers of the conditions are examples and can be changed based on available transportations.

10 (2)Second Search Method

A service range is registered each time a service is provided to each of users. Also, a shop can register the service range in the search condition database 15 in the center site 10 in FIG.9.
15 A search condition adding these service ranges is used to retrieve proper information. Thus, when the service range defined by the shop is not included in a searching range, information related to the shop is not retrieved.

20 For example, as shown in FIG.8, when institutions are searched within a neighborhood of the home, house repair shops A, B and C are retrieved. However, the service range of the house repair shop C does not include the home since the house repair shop
25 C registers the service range as a condition 15₂ of the search condition database 15. Accordingly, the house repairs A and B are displayed at the user terminal.

Hence, house repairs, which may reject a
30 repair request from the user, are not displayed at the user terminal. Reliability of a search result can be improved.

(3)Third Search Method

Searching expressions are created based on
35 specific institutions around a current location of the user. Accordingly, information suitable for the current location of the user can be provided.

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For example, if the user is near a super market D, special sales information of the super market D is retrieved from the special information database 17, of which the super market registers the special sales information as special information 17₁,
5 can be provided to the user. If the user is at a station D, timetable information of a train is retrieved from the special information database 17, of which the station D registers the timetable
10 information as special information 17₂, can be provided to the user.

To find the current location of the user, PHS (Personal Handy-phone System) connected to the user terminal and GPS (Global Positioning System) can
15 be utilized.

In order for the service site 12 to obtain the current location of the user, the user terminal may send information of the current location to the service site 12 arbitrary or periodically, or the
20 service site 12 may send a polling signal to the user terminal to obtain the information of the current location. Then, the service site 12 stores obtained information related to the current location of the user as a current location 13₁₁, a moving direction
25 13₁₂ or a moved direction 13₁₃ in a move history 13₁₀ in the member information database 11.

(4)Fourth Search Method

In the third search method as described above, when the user moves at a constant speed, the
30 search condition is changed and then information suitable for a state of the user can be provided to the user.

For example, when the user moves by a train, information related to super markets and
35 stations along a moving direction is excluded.

Therefore, it is possible to prevent from displaying useless search results.

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corresponding to the office location or the school location can be searched for and be provided to the user.

(8) Eighth Search Method

5 Based on a weather condition 15, (current weather condition or future weather condition) of the search condition database 15, information suitable for the weather condition 15, can be provided by changing the search condition.

10 For example, when the weather condition 15, shows a fine day, information available on foot can be displayed at the user terminal at a higher priority. When the weather condition 15, shows a rainy day, information available in a distance by a
15 car, online hopping information and delivery service information can be displayed at the user terminal at a higher priority.

20 FIG.10 is a block diagram of a hardware configuration of the center site according to the present invention.

25 In FIG.10, the center site 10 as a computer system includes a CPU (Central Processing Unit) 111, a memory unit 112, an input unit 114, a display unit 115, a storage unit 116, a CD-ROM driver 117 and a communication unit 118, which are mutually connected by a bus B.

30 The CPU 111 controls the entire computer system in accordance with a program resident in the memory unit 112. In addition, the CPU 111 executes processes for providing information and centrally managing the member information sent from the plurality of the service sites 20 and 20₁ through 20_N that are described above. The memory unit 112 includes ROM and RAM. Also, the memory unit 112
35 temporarily stores programs and various data necessary for or obtained from executions of the processes. In addition, a part of the memory unit

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112 is assigned as a working area accessed by CPU 111.

The input unit 114 includes a keyboard and a mouse but is not limited to only these input devices. The input unit 114 is used for a center
5 manger to register and change information, and to input information into the computer system. The display unit 115 displays results of various processes or data necessary for the center manger.

The storage unit 116 includes a hard disk
10 and stores various data and programs.

In accordance with instructions from the CPU 111, the CD-ROM driver 117 reads information from the CD-ROM 120 set in the CD-ROM driver 117 and then provides the information to the storage unit 116.
15 For example, various programs according to the present invention are provided by the CD-ROM 120. That is, the programs read from the CD-ROM 120 are installed in the storage unit 116 through the CD-ROM driver 117. It should be noted that a recording
20 medium is not limited to the CD-ROM 120, but another computer-readable recording medium such as a magnetic disk, a magnetic tape, an optical disk, a magneto-optical disk, a semiconductor memory or the like may be used.

25 According to the present invention, it is possible to reduce overload related to the user registration in each service site and it is also for each service site to obtain new member information.

In addition, the service site can rapidly
30 conduct necessary processes based on the member information. If necessary, the service site can automatically conduct the searching process to retrieve proper information meeting to a requirement of the user.

35 Also, the service site displays a homepage suitable for the requirement of the user based on the class, at the user terminal.

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Furthermore, based on the service region
5 registered for each shop, only shops available for a
specific service can be retrieved. Therefore, it is
possible to improve reliability of retrieved
information as a search result.

The present invention is not limited to the specifically disclosed embodiments, variations and modifications, and other variations and
15 modifications may be made without departing from the scope of the present invention.

The present application is based on Japanese Priority Application No.2000-183665 filed on June 19, 2000, the entire contents of which are hereby incorporated by reference.